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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,315	01/04/2002	Wei Kuang Teng	BHT-3092-258	1997
40144 7590 09/26/2007 TROXELL LAW OFFICE PLLC 5205 LEESBURG PIKE, SUITE 1404 FALLS CHURCH, VA 22041			EXAMINER SHIFERAW, ELENI A	
			ART UNIT 2136	PAPER NUMBER
			MAIL DATE 09/26/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/035,315

Applicant(s)

TENG, WEI KUANG

Examiner

Eleni A. Shiferaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment: See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 2, and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/31/2007 has been entered.

2. Claims 1-2 and 4-6 are pending.

***Response to Amendment/argument***

3. Applicant's amendments and arguments filed 07/31/2007 have been fully considered and argument is moot in view of new grounds of rejection.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luu et al. USPN 6,691,213 B1 in view of Han et al. USPub. 2005/0015652 A1.

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Regarding claim 1, Luu et al. teaches a method for data security with lock in a hard disk and a solid state disk, comprising following steps:

partitioning a single disk drive into a plurality of disk zones (col. 3 lines 30-50, col. 2 lines 39-64, and fig. 2-3) including a user zone (col. 2 line 39; *user area and/or user's unlimited access to the area*), a ROM zone (col. 3 lines 30-50; *host-protected area*), and a protect zone (col. 2 lines 39-41 and fig. 2-3; *protected area*);

providing a plurality of registers for indicating a record of a size of each of the plurality of disk zones (col. 3 lines 30-67; *protected area 22 LPB =MAX, user area 18 LBA is 0-MAX, management area 54 LBA=-ve*);

utilizing a mathematical operation for treating a user input data and a register data (col. 5 lines 4-67; *LBA size determined/compared*); and

wherein the user zone is configured to allow a user to execute all ATA commands and the protect zone is configured to prevent a user from reading or writing (col. 3 lines 39-41 and col. 3 lines 40-50).

Luu et al. fails to disclose assigning one of two different passwords to each of the ROM zone and the protected zone utilizing a password operation mode utilizing the mathematical operation with the user input data and the register data, wherein the user zone is configured to allow a user to execute all ATA commands and the protect zone is configured to prevent a user from reading or writing.

However Han et al. disclose assigning one of two different passwords to each of the ROM zone and the protected zone (par. 45 last 3 lines, abstract and fig. 3 and 2; *partitioning a*

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*hard disk... the user setting up passwords for partitions*) utilizing a password operation mode utilizing the mathematical operation with the user input data and the register data (par. 45).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to employ the teachings of Han et al. with in the system of Luu et al. because they are analogous in hard disc partitioning. One would have been motivated to incorporate the teachings of setting up passwords to each partitioned zones because each partitioned hard disk zones would be securely protected.

Regarding claim 2, Luu et al. discloses the method for data security with lock in a hard disk and a solid state disk, wherein the registers are a R\_index register, a P-index register and LBA\_max register for indicating records of three zone size (see fig. 3 and col. 3 lines 30-67 *for different size of registers indexed*).

Regarding claim 4, Luu et al. discloses the method for data security with lock in a hard disk and a solid state disk, wherein when the register R\_index.gtoreq.1 and the register LBA\_max>the register P\_index>the register R\_index, the disk drive 1 is divided into three zones, the disk drive is divided into the user zone, the ROM zone and the protect zone (see fig. 3 and col. 3 lines 30-67).

6. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luu et al. USPN 6,691,213 B1 in view of Han et al. US Pub. 2005/0015652 A1, and further in view of Yamamoto et al. (Yamamoto, US 6,532,513 B1).

Regarding claim 5, Luu et al. and Han et al. teach all the subject matter as described above and the method for data security with lock in a hard disk and a solid state disk (see Luu et al. fig. 3 and Han et al. abstract). Luu et al. and Han et al. fail to explicitly disclose wherein wherein when the register  $R\_index \geq 1$  and the register  $LBA\_max = \text{the register } P\_index > \text{the register } R\_index$ , the disk drive is divided into two zones, the user zone and the ROM zone.

However Yamamoto discloses the method for data security with lock in a hard disk and a solid state disk, wherein when the register  $R\_index \geq 1$  and the register  $LBA\_max = \text{the register } P\_index > \text{the register } R\_index$ , the disk drive is divided into two zones, the user zone and the ROM zone (col. 12 lines 54-col. 12 lines 15; *LBA\_max and register indexes are compared and disk storage is partitioned into different zone sizes*).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to employ the teachings of Yamamoto within the combination system because they are analogous in magnetic information/data storage memory (see, Yamamoto fig. 1 element 107 and claim 1). One would have been motivated to do so because it would have different sizes of register indexes (col. 12 lines 54-col. 12 lines 15).

Regarding claim 6, Yamamoto further discloses the method for data security with lock in a hard disk and a solid state disk, wherein when the register  $R\_index \geq 1$  and the register  $LBA\_max > \text{the register } P\_index = \text{the register } R\_index$ , the disk drive 1 is divided into two zones, the user zone and the protect zone (col. 12 lines 54-col. 12 lines 15; *LBA\_max and register indexes are compared and disk storage is partitioned into different zone sizes*). The rationale for

combining are the same as claim 5 above.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Parzych et al. US 5,375,243; *using password to unlock a hard drive for protected data/program is very well known in 1991...1994.*
- b. Gardner Pub. No.: US 2003/0101322 A1: *partitioning a memory to store secure data/program...*

For more prior arts see Form 892 attached.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni A. Shiferaw whose telephone number is 571-272-3867.

The examiner can normally be reached on Mon-Fri 8:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser R. Moazzami can be reached on (571) 272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 19, 2007.

NASSER MOAZZAMI  
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9, 21, 07